ORDER NO. GAD8606045A2

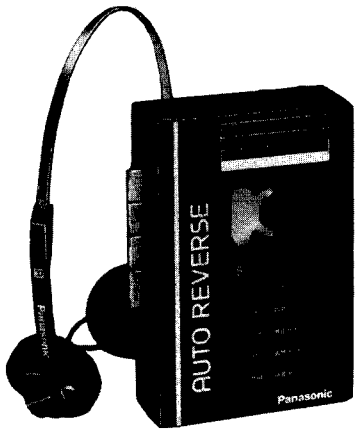
Service Manual

Radio Cassette

RX-SA77

(Black)

Stereo Radio Cassette Player



This is the Service Manual for the following areas.

[Z]...For all European areas except United Kingdom and F.R. Germany

[E]...For United Kingdom

[G]...For F.R. Germany

- Please use this manual together with the service manual for model No. RX-SA77 order No. GAD8604027C1.
- This service manual indicates the main differences between; Original RX-SA77 (for [M] areas) and RX-SA77 [Z] [E] [G].

■ SPECIFICATIONS

Power Requirement:
AC; 120 V, 60 Hz with optional Panasonic AC adaptor RD-9443HA
Battery; 3 V (Two UM-3, "AA" size Penlight Batteries)
(Panasonic UM-3 or equivalent)
Car Battery; with optional Panasonic car adaptor RP-993 and Panasonic DC plug adaptor RP-007
Radio Frequency Range: FM; 88~108 MHz
AM; 525~1610 kHz
Intermediate Frequency: FM; 10.7 MHz
AM; 455 kHz

RX-SA77 [M] (Original)

Power Requirement:
AC; 220 V, 50 Hz with optional AC adaptor RD-9443HS (For U.K., 240 V, 50 Hz with optional AC adaptor RD-9443HE)
Radio Frequency Range: FM; 87.5~108 MHz
AM; 520~1,610 kHz
Intermediate Frequency: FM; 10.7 MHz
AM; 455 kHz [Z] [G]
470 kHz [E]

RX-SA77 [Z] [E] [G]

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ PARTS COMPARISON TABLE

NOTES:

1. The letter in the circle after the part name indicates the color of the part.
   Ⓚ...Black
2. (E)...For United Kingdom
   (G)...For F.R. Germany

Ref. No.	Part Name and Description	Part Number		Remarks
		RX-SA77 [M]	**RX-SA77 [Z][E][G]**	
L2 (G)	Oscillator Coil, FM	RL04Y19	**RL04N225**	[G] only
CT2 (G)	Trimmer Capacitor	ECRLA010A12	**RCVCTZ3210**	[G] only
CF2 (E)	Ceramic Filter 470 kHz	RVFPFA455A	**RVFPFA470A**	[E] only
C8 (G)	Capacitor, 50 V 27 P	RCUX1H200KC	**RCUV1H270JP**	[G] only
R13, 14	Resistors, 4.7 kΩ	RRD10XJ223	**RRD10XJ472**	
K12 (G)	Rear Cabinet Ass'y Ⓚ	RYFXSA77M	**RYFXSA77ZG**	[G] only
K24 (G)	Cassette Lid Ass'y Ⓚ	RYQXSA77M	**RYQXSA77ZG**	[G] only
A3	Operating Instructions	RQX4820Z	**RQX4872ZA**	
P1	Gift Box	RPKA0015Z	**RPKA0025ZA**	

MEASUREMENTS AND ADJUSTMENTS

[Z]...For all European areas except United Kingdom and F.R. Germany
[E]...For United Kingdom
[G]...For F.R. Germany

■ AM ALIGNMENT

AM-IF ALIGNMENT

(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/ about 600 kHz)	Output meter across voice coil.	T3 (AM IFT)	Adjust for maximum output.

RX-SA77 [M] (Original)

(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	**455 kHz..[Z][G]** **470 kHz..[E]** 30% Mod. at 400 Hz	Point of non-interference. (on/ about 600 kHz)	Output meter across voice coil.	T3 (AM IFT)	Adjust for maximum output.

RX-SA77 [Z][E][G]

■ FM ALIGNMENT

FM-RF ALIGNMENT

(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2	**86.2 MHz**	Variable capacitor fully closed.	Output meter across voice coil.	L2 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM		109.2 MHz	Variable capacitor fully open.	"	CT2 (FM OSC Trimmer)	"
(5)	FM		90 MHz	Tune to signal.	"	L1 (FM ANT Coil)	"
(6)	FM		106 MHz	"	"	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(6).
(*2) Three output responses will be present; proper tuning is the center frequency.							

RX-SA77 [M] (Original)

(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2	**87.5 MHz**	Variable capacitor fully closed.	Output meter across voice coil.	L2 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM		**108.0 MHz**	Variable capacitor fully open.	"	CT2 (FM OSC Trimmer)	"
(5)	FM		90 MHz	Tune to signal.	"	L1 (FM ANT Coil)	"
(6)	FM		106 MHz	"	"	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(6).
(*2) Three output responses will be present; proper tuning is the center frequency.							

RX-SA77 [Z][E][G]

■ ALIGNMENT POINTS

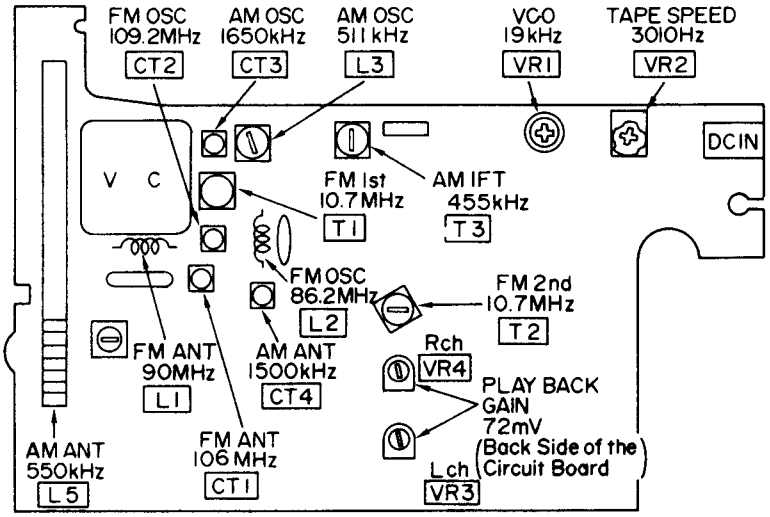


Fig. 1

RX-SA77 [M] (Original)

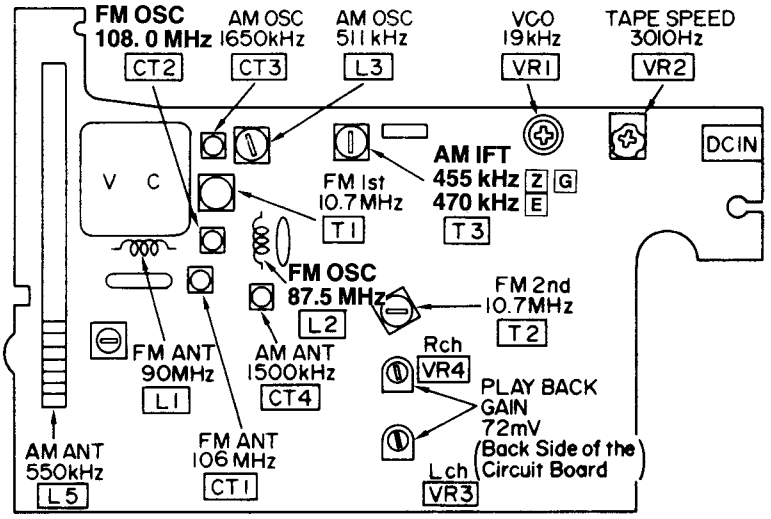


Fig. 1

RX-SA77 [Z] [E] [G]

GAD T.H Z E G Printed in Japan Ⓕ

ORDER NO. GAD8604027C1
A1

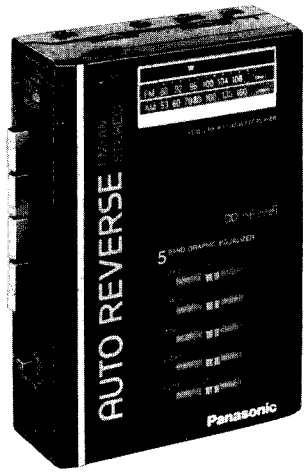
Service Manual

Radio Cassette

RX-SA77

(Black)

Stereo Radio Cassette Player



This is the Service Manual for the following areas.

M...For U.S.A.

C...For Canada.

RX-SA77 Mechanism Series

■ SPECIFICATIONS

General:

Power Requirement:	AC; 120 V, 60 Hz with optional Panasonic AC adaptor RD-9443HA Battery; 3 V (Two UM-3, "AA" size Penlight Batteries) (Panasonic UM-3 or equivalent) Car Battery; with optional Panasonic car adaptor RP-993 and Panasonic DC plug adaptor RP-007
Power Output:	40 mW (20 mW×2)...RMS (max.)
Input:	DC IN; 3 V (mini jack)
Output:	Headphones; 32Ω ∅3.5
Dimensions:	3¼" (W)×4⅝" (H)×1⅜" (D) [82 (W)×117.5 (H)×35 (D) mm]
Weight:	9.2 oz. (260 g) without batteries

Radio Section:

Radio Frequency Range:	FM; 88~108 MHz AM; 525~1610 kHz
Intermediate Frequency:	FM; 10.7 MHz AM; 455 kHz
Sensitivity:	FM; 2.5 µV/1 mW output (−3 dB Limit sens) AM; 56 µV/m/1 mW output

Tape Deck Section:

Frequency Response:	Normal; 50~12000 Hz CrO_2; 50~12000 Hz Metal; 50~12000 Hz
Motor:	Electrical governor motor
Track System:	4-track 2-channel stereo playback
Tape Speed:	1⅞ ips (4.8 cm/s)

Weights and dimensions shown are approximate.
(Les poids et dimensions mentionnes sont approximatifs.)
Design and specifications are subject to change without notice.

Panasonic®

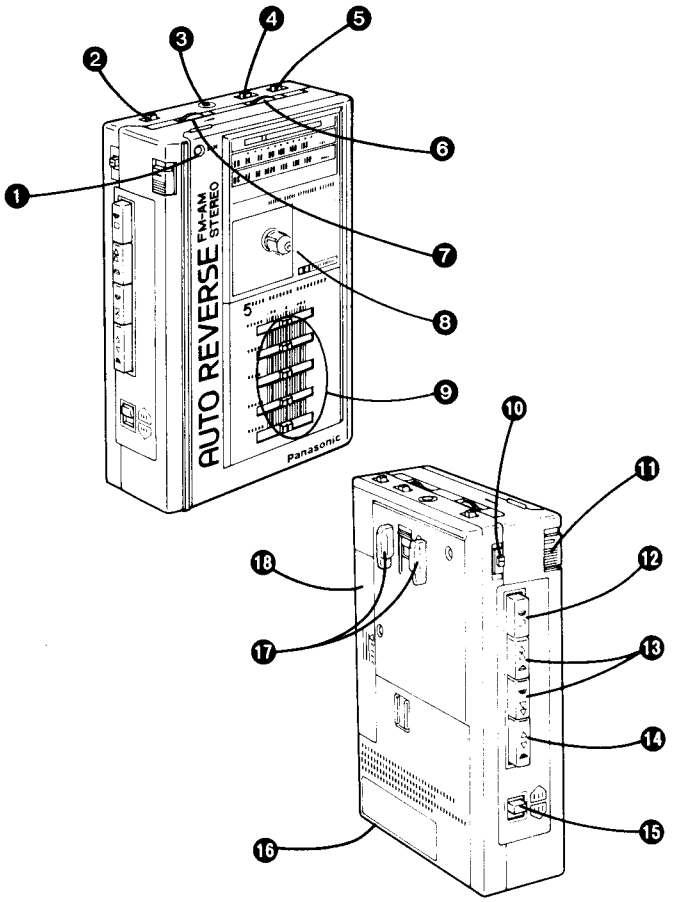
Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Matsushita Electric of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

LOCATION OF CONTROLS AND COMPONENTS



❶ FM Stereo Indicator (FM ST)
❷ Tape Selector (TAPE)
❸ Headphones Jack (PHONES) ∅3.5, 32Ω
❹ Band Selector (BAND)
❺ *Dolby Noise Reduction Switch (DOLBY NR)
❻ Tuning Control (TUNING)
❼ Volume Control (VOLUME)
❽ Cassette Compartment
❾ Graphic Equalizer Controls (5 BAND GRAPHIC EQUALIZER)
❿ Function Selector (SELECTOR)
⓫ FM Sensitivity Selector (FM SENSITIVITY)
⓬ Stop Button (■ STOP)
⓭ Fast Buttons (▲ • ▼ FAST)
⓮ Playback Button (◆ PLAY)
⓯ Tape Direction Selector (DIRECTION)
⓰ DC Input Jack (DC IN 3 V ⊖-●-⊕) [Bottom]
⓱ Clip Receptacle
⓲ Battery Compartment

*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

BATTERY SERVICE LIFE
UM-3 (AA size) Batteries
Approx. 4 hours of playback (EIAJ) with volume set at 8.5 position

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

DISASSEMBLY INSTRUCTIONS

■ Removing the Rear Cabinet

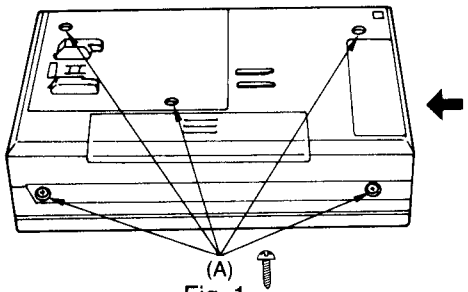


Fig. 1

1. Remove the screws (A) (2×8) mm×5.
2. Push the inside of the Front Cabinet in the direction of arrow.

■ Removing the Main Circuit Board

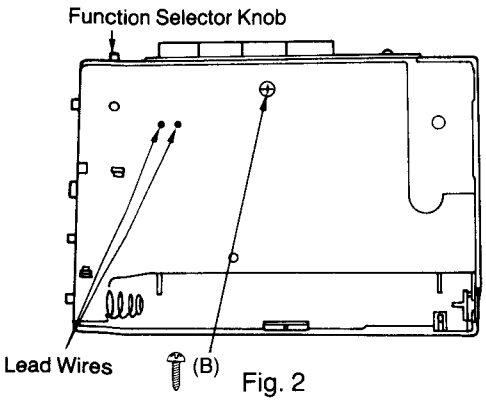


Fig. 2

1. Disconnect the two soldered connections of the lead wires.
2. Remove the screw (B) (1.6×4) mm×1.
3. The selector knob will come off at the same time the PC board is removed, so be careful.

■ Caution upon removing the Circuit Board

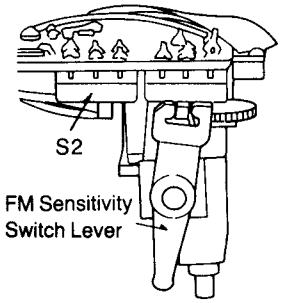


Fig. 3

1. When removing the circuit board from the main unit, the FM Sensitivity switch lever may disengage.
2. When resetting the FM Sensitivity switch lever, the tooled face of the lever should face the S2 side. (Refer to Fig. 3.)

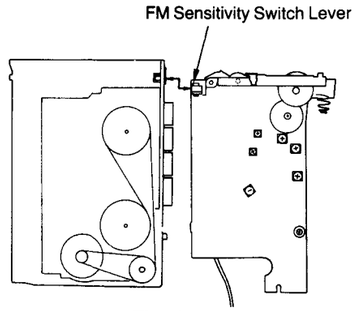


Fig. 4

3. Align the Knob and the FM Sensitivity switch lever with the direction of the arrow upon resetting.

■ Removing the Mechanism

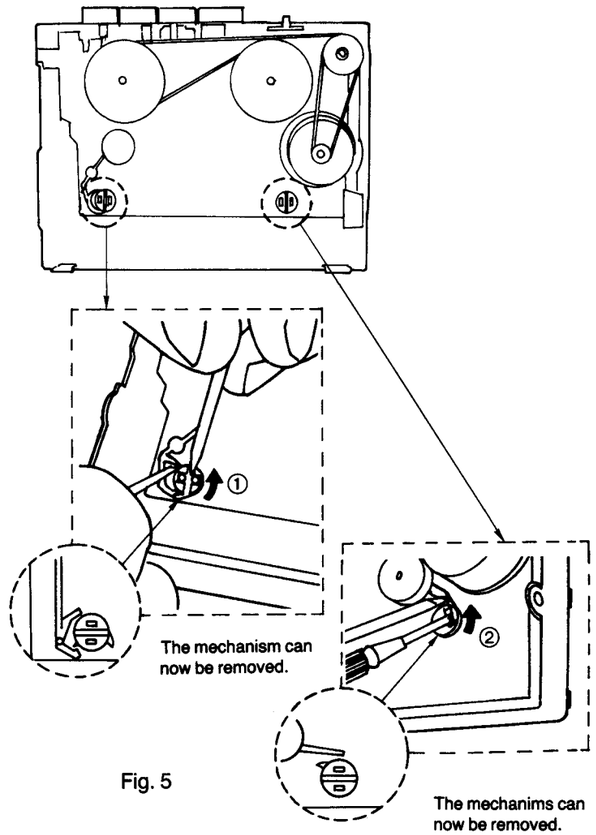


Fig. 5

1. Remove the lugs of the plastic bosses. Turn each boss 90° in the direction of arrows ① and ②, and remove the mechanism from the cabinet.

■ Removing the Cassette Lid and the Graphic Equalizer Circuit Board

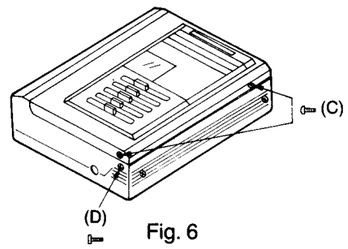


Fig. 6

1. Remove the screw (C) (1.6×1.4) mm×2.
2. Remove the screw (D) (1.6×2) mm×1.

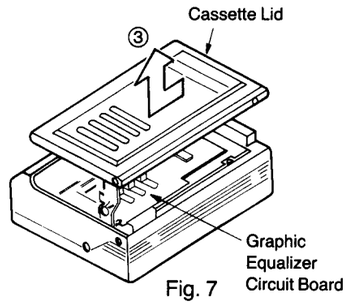


Fig. 7

3. Push the cassette lid in the direction of arrow ③, and disconnect the inside boss.

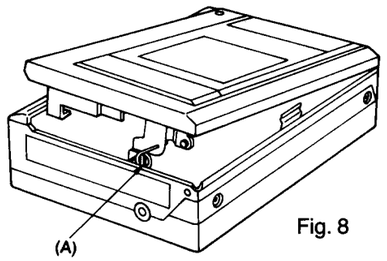


Fig. 8

4. Remove the spring (A).

■ Dial Setting Point

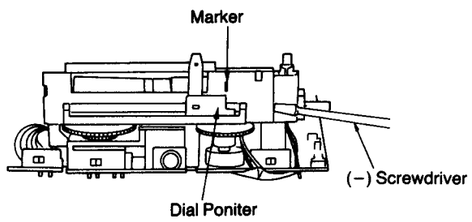


Fig. 9

1. Align the needle of the meter with the mark.

(To remove the Pointer holder, insert a standard screwdriver in the location shown in the figure and gently pry the Pointer holder off.)

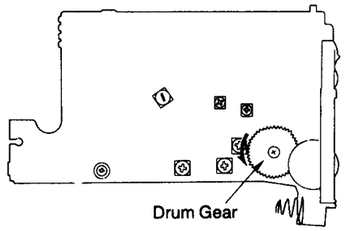


Fig. 10

2. Turn the drum gear fully in the direction of the arrow. Re-fix the chassis of the dial in the manner shown in the diagram.

■ How to Replace the Cassette Lid Spring

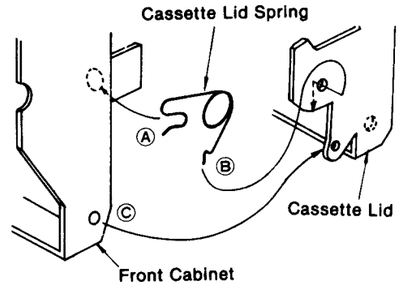


Fig. 11

1. Fit part Ⓐ on the shaft of the front cabinet.
2. Insert part Ⓑ in the hole in the cassette lid.
3. Fit the boss Ⓒ in the cassette lid (same on right side).

■ Replacement of a Plastic Boss

If a plastic boss for attachment of the mechanism should become broken, replace it by following the procedure below.

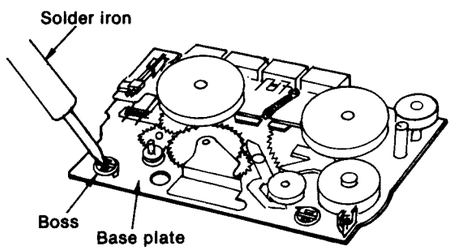


Fig. 12

1. Use a soldering iron to melt and remove the damaged boss.

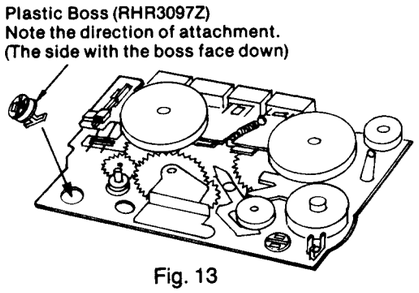


Fig. 13

2. Attach the plastic boss (RHR3097Z) located on the back of the mechanism.
(The boss is not attached to the base plate, so be careful not to lose it until the front cabinet is assembled.)

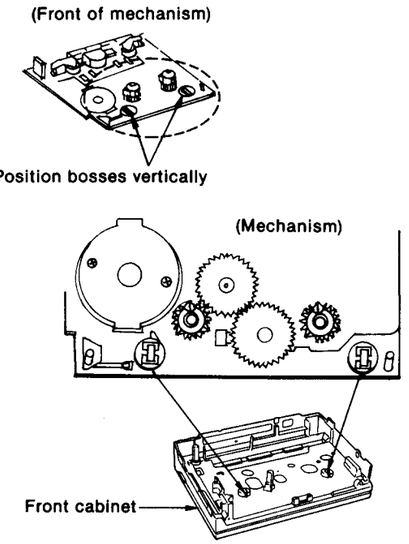


Fig. 14

3. Position plastic bosses vertically and insert them in the holes in the front cabinet. (Make sure they are firmly in place.)

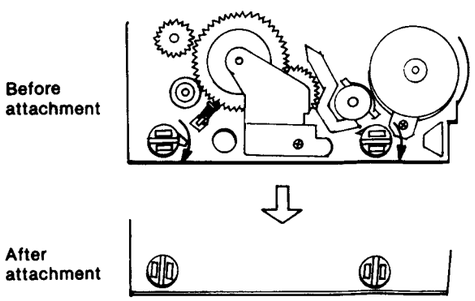


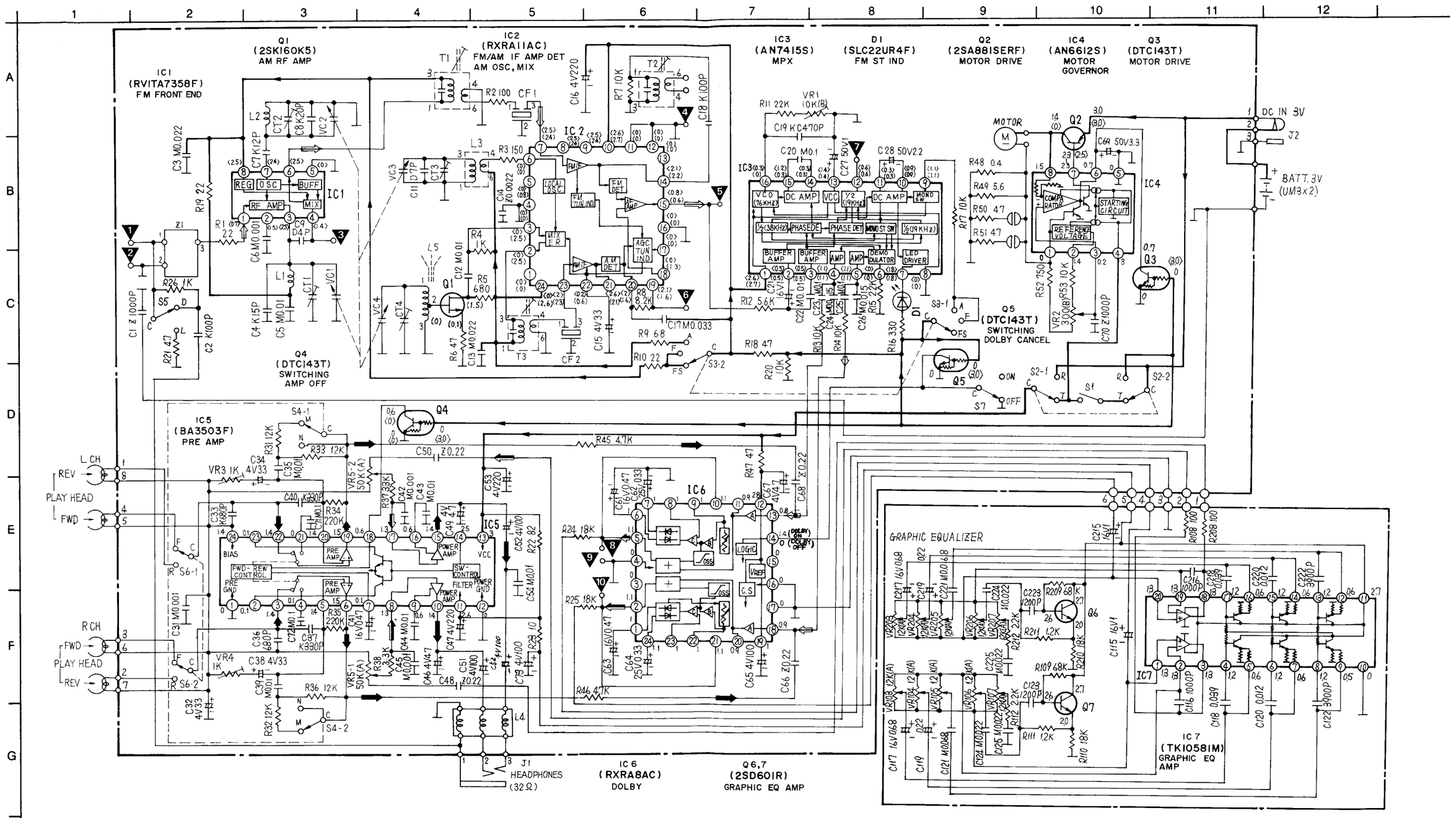
Fig. 15

4. Use a flat-head screwdriver to turn the bosses 90° in the direction of the arrows. (There are lugs in the front cabinet, so the bosses will not turn in the opposite direction.)
5. Make sure the mechanism is secure in the cabinet.

▼ Be sure to fold at the (▼) mark so that mark is on the outside.

D

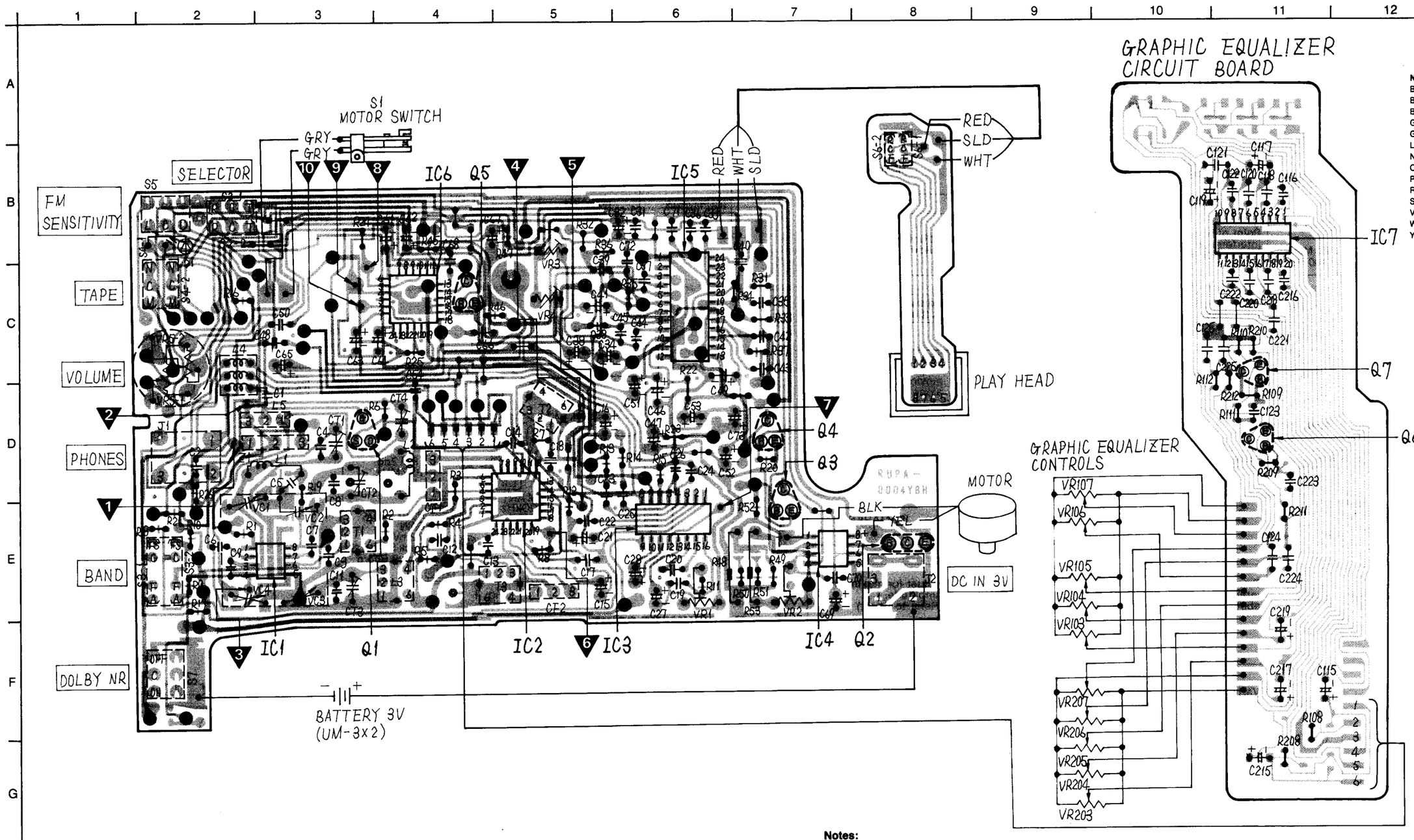
SCHEMATIC DIAGRAM



Notes:

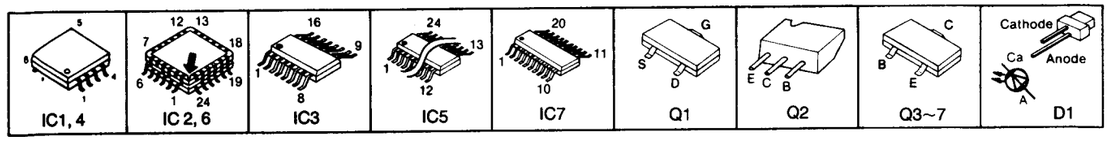
1. S1: Motor Switch in "OFF" position.
2. S2-1, S2-2: Function Selector Switch in "TAPE" position. (R...Radio, T...Tape)
3. S3-1, S3-2: Band Selector Switch in "FM STEREO" position. (F.S...FM STEREO, F...FM MONO, A...AM)
4. S4-1, S4-2: Tape Selector Switch in "METAL" position. (M...Metal, N...Normal)
5. S5: FM Sensitivity Switch in "DX" position. (D...DX, L...Local)
6. S6-1, S6-2: Direction Switch in "FWD" position. (F...FWD, R...REV)
7. S7: Dolby Switch in "OFF" position.
8. VR1: FM VCO Frequency adjust VR.
9. VR2: Tape speed adjustment VR.
10. VR3, 4: Playback gain adjustment VR.
11. VR5-1, 5-2: Volume control VR.
12. VR101~107, VR201~207: Graphic equalizer VR.
13. The mark (▼) shows test point e.g. ▼ =test point 1.
14. DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
    ( )...AM Position, < >...FM Position,
    No mark...Playback position
15. Battery current: No signal ..... 23 mA
    Maximum output (radio) ..... 29 mA
    Maximum output (tape) ..... 164 mA
16. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2SC2412NRTB, LNSTB ← Production parts number
    [2SC2412] ← Supply parts number
17. The supply parts number is described alone in the replacement parts list.

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



NOTES:

BLK	Black
BLU	Blue
BRN	Brown
GRY	Gray
GRN	Green
L. BLU	Light Blue
NIL	No Color Mark
ORG	Orange
PNK	Pink
RED	Red
SLD	Shield Wire
VLT	Violet
WHT	White
YEL	Yellow



Notes:

1. The circuit shown in (▬) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in (▬) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.

•This circuit board diagram may be modified at any time with the development of new technology.

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set equalizer control to center. 3. Set ultra phonic mode switch to OFF. 4. Set band switch to AM or FM ST. 5. Set selector switch to radio.	6. Set power source voltage to 3 V DC. 7. Set Dolby NR Switch to OUT. 8. Set Tape Selector Switch to normal. 9. Output of signal generator should be no higher than necessary to obtain an output reading.

■ AM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ALIGNMENT					
(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/ about 600kHz)	Output meter across voice coil.	T3 (AM IFT)	Adjust for maximum output.
		AM-RF ALIGNMENT					
(2)	AM	"	511kHz	Tuning capacitor fully closed.	"	L3 (AM OSC Coil)	Adjust for maximum output.
(3)	AM	"	1,650kHz	Tuning capacitor fully open.	"	CT3 (AM OSC Trimmer)	"
(4)	AM	"	550kHz	Tune to signal.	"	(*1) L5 (AM ANT Coil)	Adjust for maximum output. Adjust L5 by moving coil bobbin along ferrite core.
(5)	AM	"	1,500kHz	"	"	CT4 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).
	(*1) Cement antenna bobbin with wax after completing alignment.						

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		FM-IF ALIGNMENT					
(1)	FM	High side thru. 0.001μF to test point ③. Negative side to test point ②.	10.7MHz (SWP.)	Point of non-interference. (on/ about 90MHz)	Connect vert. amp. of scope to test point ⑤. Negative side to test point ④.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 2.)
(2)	FM	"	"	"	"	T2 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 3.)
		FM-RF ALIGNMENT					
(3)	FM	Connect to test point ① through FM dummy antenna. Negative side to test point ②.	86.2 MHz	Variable capacitor fully closed.	Output meter across voice coil.	L2 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM		109.2MHz	Variable capacitor fully open.	"	CT2 (FM OSC Trimmer)	"
(5)	FM		90MHz	Tune to signal.	"	L1 (FM ANT Coil)	"
(6)	FM		106MHz	"	"	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(6).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

■ SEPARATION ALIGNMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98MHz, 60dB (CW) Connect to test point ① through FM dummy antenna. Negative side to test point ②.	⑦...(+) ④...(−)	VR1	19kHz	Adjust VR1, for 19kHz (±100Hz) reading on electronics counter.

■ ALIGNMENT INSTRUCTION

ITEM	INPUT	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
(A) Azimuth	QZZCFM (8kHz, −20dB)	Headphones jack (32Ω)	Azimuth adjustment screw (Refer to Fig. 4)	Adjust the azimuth adjustment screw during repeated forward and reverse playback to obtain the maximum head azimuth alignment with both channels equal. Then screw-lock the adjustment in place.
(B) Tape speed	QZZCWAT (3kHz, −10dB)	〃	VR2 (Refer to Fig. 1)	Playback the central part of the tape and adjust VR2 so that the tape speed is as follows. 3000±90 Hz (Forward & Reverse)
(C) Playback gain	QZZCFM (315 Hz, 0 dB)	⑧...(+) L-CH ⑩...(−) ⑨...(+) R-CH	VR3 (L-CH) VR4 (R-CH)	Playback any part of the tape and adjust VR3 and VR4 so that the playback gain is 72±8 mV.

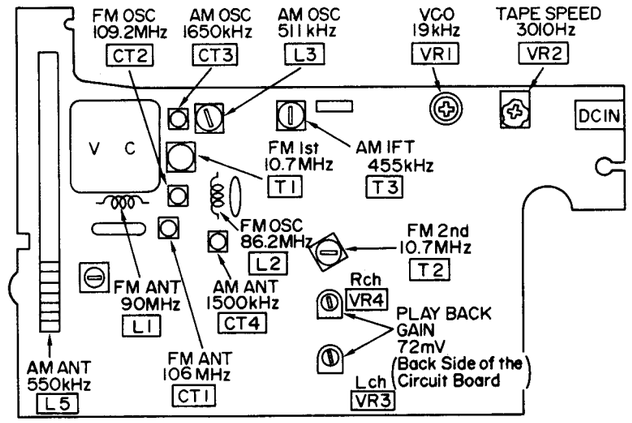


Fig. 1

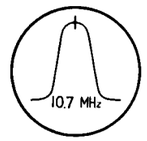


Fig. 2

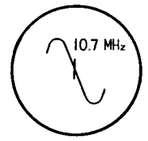


Fig. 3

■ ALIGNMENT POINTS

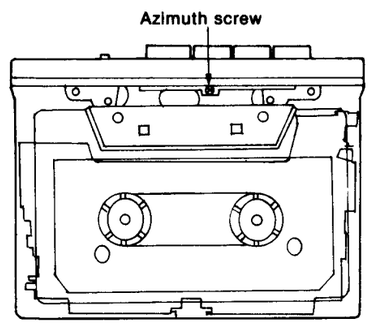


Fig. 4

1. To perform the azimuth adjustment, insert a test tape with the cassette lid removed according to the disassembly instructions in Figs. 1 through 3.
2. Press the PLAY button, and turn the azimuth adjustment screw while the tape is traveling.

■ Removing a Jammed Tape

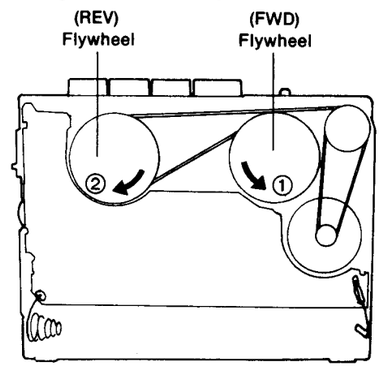


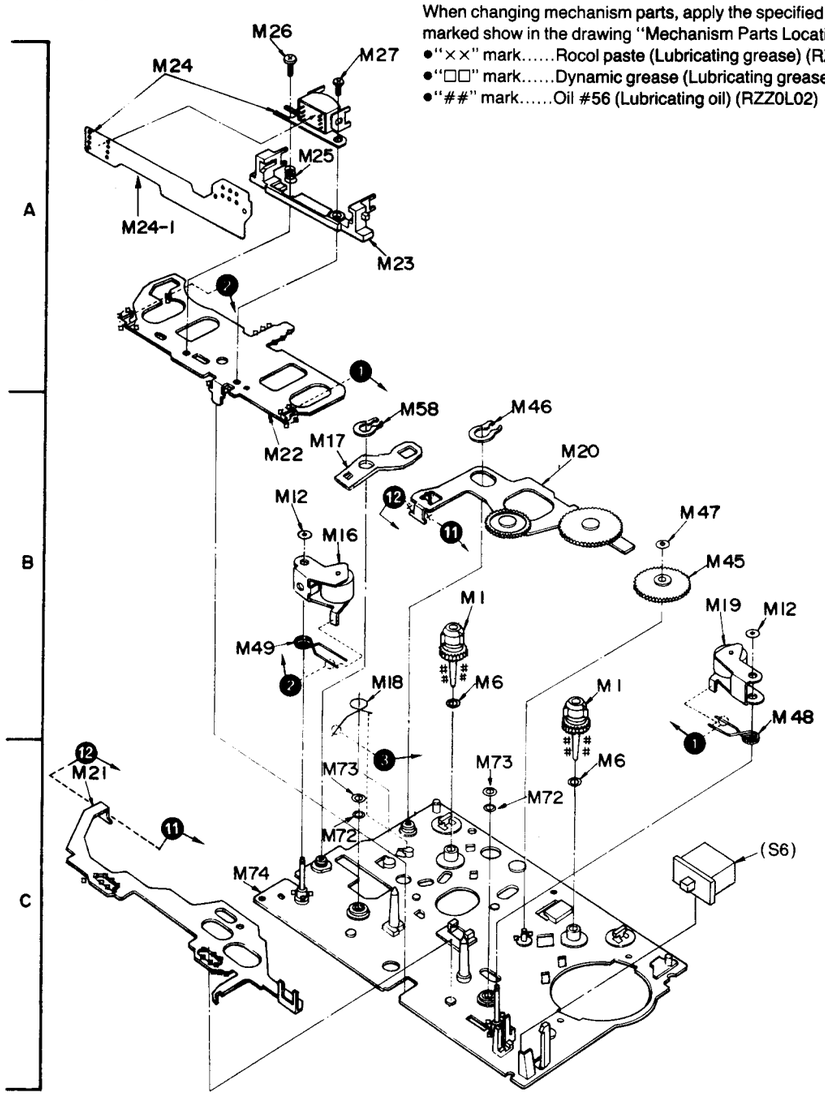
Fig. 5

1. Remove the batteries and/or disconnect the DC IN power supply.
2. Follow the disassembly instructions in Figs. 4 and 5 to remove the rear cabinet.
3. Depending on the direction of tape travel (FWD, REV), turn the corresponding flywheel in the direction of arrow ① for FWD and in the direction of arrow ② for REV.

MECHANISM PARTS LOCATION

• Front View

NOTES:
When changing mechanism parts, apply the specified grease to the area marked show in the drawing "Mechanism Parts Location".
- "××" mark.....Rocol paste (Lubricating grease) (RZZ0L06)
- "□□" mark.....Dynamic grease (Lubricating grease) (RZZ0L05)
- "##" mark.....Oil #56 (Lubricating oil) (RZZ0L02)



| | | |

DISASSEMBLY OF MAJOR MECHANISM PARTS

■ Head

1. Remove the solder of head and remove the FWC circuit board (Fig. 1).
2. Remove the screw M27 (2×4)mm and M26 (Fig. 1).

■ Pinch Roller

1. FWD side ... Remove the washer M12 (Fig. 2).
   REV side ... Remove the washer M12 (Fig. 2).

■ Motor

1. Remove the motor belt M70 (Fig. 4).
2. Remove the two screws M31 (1.7×2.5)mm (Fig. 2).

■ Flywheel

1. Remove the flywheel belt M69 (Fig. 4).
2. FWD side ... Remove the two washers M71, M72 (Fig. 1).
   REV side ... Remove the two washers M71, M72 (Fig. 1).

■ Reel Table Gear

1. FWD side ... Remove the plate M3, felt M4, bush M5 (Fig. 3).
   REV side ... Bush M2 (Fig. 3).

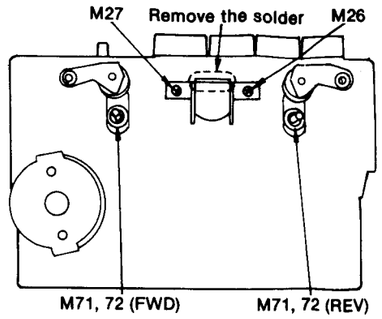


Fig. 1

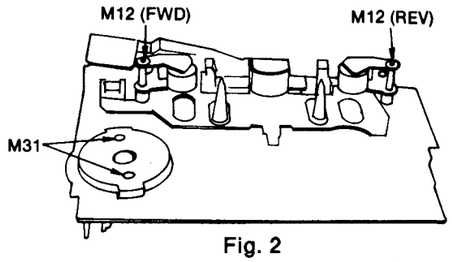


Fig. 2

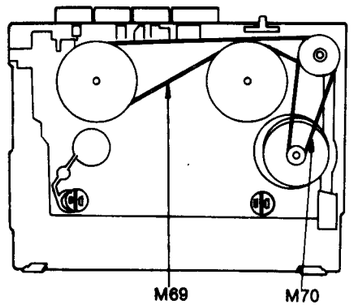


Fig. 4

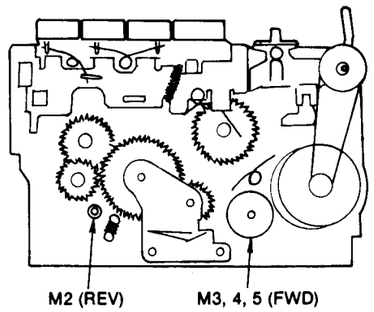
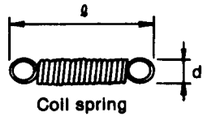
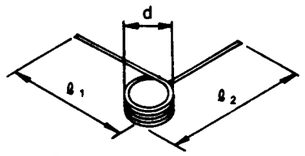


Fig. 3



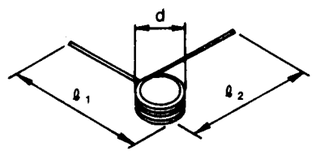
Coil spring

Ref. No.	ℓ ×d(mm)
M7	5.5×4.5
M25	3.5×3
M41	11.5×3
M62	7×3



Twist spring (Right turn)

Ref. No.	ℓ 1× ℓ 2×d(mm)
M42	14.5×14.5×4
M43	9×13×4
M48	14.5×15×4.5

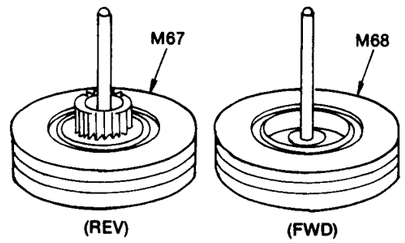


Twist spring (Left turn)

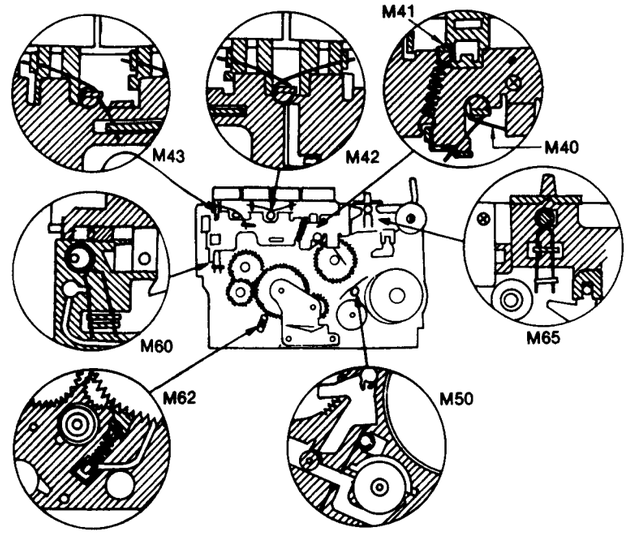
Ref. No.	ℓ 1× ℓ 2×d(mm)
M18	18×9×5
M40	11×19×4.5
M49	15×13×4.5
M50	10×18×3.5
M60	18.5×18.5×5
M65	13×13.5×4

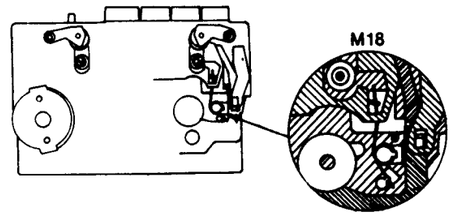
■ DISTINGUISHING BETWEEN FLYWHEELS

The FWD flywheel and REV flywheel are different, so be sure to distinguish between them as shown below.



SPRING LOCATION



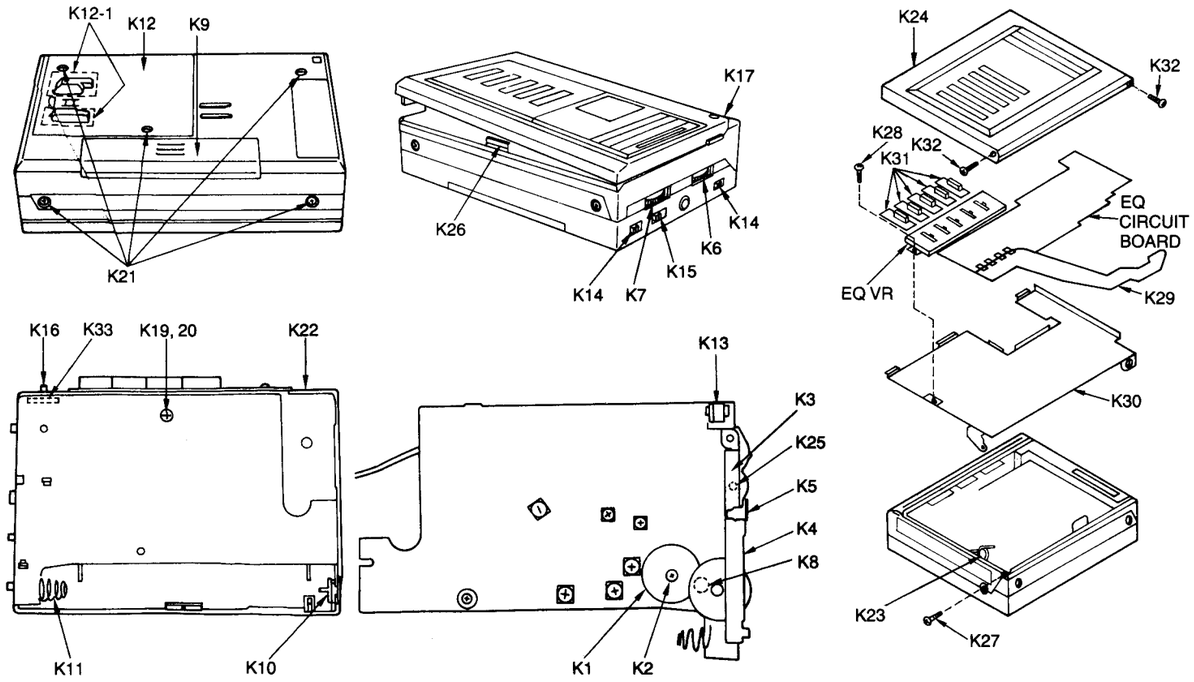


ACCESSARY AND PACKING MATERIALS

The letter in the circle after the part name indicates the color of the part.
Ⓚ...Black

Ref. No.	Part. No.	Part Name & Description
		ACCESSORIES
A1	**RP9545M**	Headphone Ⓚ
A1-1	**RWR84615A29**	Ear Pad
A2	**RKE447Z4**	Belt Criper Ⓚ
A3 (M) [For U.S.A.]	**RQX4820Z**	Operating Instructions
A3 (C) [For Canada]	**RQX4821**	Operating Instructions
		PACKINGS
P1 (M) [For U.S.A.]	**RPKA0015Z**	Gift Box
P1 (C) [For Canada]	**RPKA0020Z**	Gift Box
P2	**XZB16X25A02**	Polyethylene Cover
P3	**QPCA0001**	Packing Sheet
P4	**RPNA0009Z**	Pad (Bottom)
P5	**RPHA0004Z**	Pad (Upper)
P6	**RPEA0003Z**	Spacer, Play Button

CABINET PARTS LOCATION



The letter in the circle after the part name indicates the color of the part.
Ⓚ...Black, Ⓦ...White.

Ref. No.	Part. No.	Part Name & Description
	CABINET PARTS	
K1	**RDG5744Z**	Drum Gear
K2	**XSHR17+2FZ**	Screw (Drum Gear M'tg)
K3	**RUAA0003Z**	Dial Chassis
K4	**RUAA0004Z**	Holder, Dial Pointer
K5	**RDPA0001Z**	Dial Pointer Ⓦ
K6	**RBTA0001Z**	Knob, Volume Ⓚ
K7	**RBTA0002Z**	Knob, Tuning Ⓚ
K8	**RDGA0001Z**	Gear, Middle
K9	**RKKA0002Z**	Cover, Battery Ⓚ
K10	**RJCA0001Z**	Terminal, Battery +
K11	**RJCA0002Z**	Spring (Battery −)
K12	**RYFXSA77M**	Rear Cabinet Ass'y Ⓚ
K12-1	**RMXA0001Z**	Shield Plate A
K13	**RNLA0001Z**	Lever, FM Sensitivity Switch
K14	**RBDA0003Z**	Knob, Tape Selector, Dolby Ⓚ
K15	**RBDA0004Z**	Knob, Band Selector Ⓚ
K16	**RBDA0005Z**	Knob, SELECTOR Ⓚ
K17	**RBDA0006Z**	Knob, FM Sensitivity Ⓚ
K19	**XQNQC16A4F**	Screw (Circuit Board M'tg)
K20	**XWC2B**	Washer (Circuit Board M'tg)
K21	**XTN2+8JFZ**	Screw (Rear Cabinet M'tg) Ⓚ
K22	**RKMA0004X**	Main Cabinet Ⓚ
K23	**RUSA0005Z**	Spring (Cassette Lid)
K24	**RYQXSA77M**	Cassette Lid Ass'y Ⓚ
K25	**XQN17B4FZ**	Screw (Volume Knob M'tg)
K26	**RUSA0001Z**	Spring, Cassette Holding
K27	**QHQ1370K**	Screw (Cassette Holder M'tg)
K28	**XQN14+A12FN**	Screw (EQ VR M'tg)
K29	**RUPA0007Z**	Flexible Lead Wire
K30	**RKGA0006Z**	Cassette Holder
K31	**RBDA0007Z**	Knob, EQ VR
K32	**XQN16+A14FZ**	Screw (Cassette Lid M'tg)
K33	**RMXA0002Z**	Shield Plate B

ELECTRICAL PARTS LIST

ELECTRICAL PARTS LIST

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)

ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Resistor Type	Wattage Tolerance
ERD: Carbon	10 : 1/8 W J : ±5%
ERD: Metal Film	12 : 1/2 W
ERX: Metal Film	25 : 1/4 W
ERQ: Fuse Type Metal	1 : 1 W
RRD: Carbon (Chip Type)	18 : 1/8 W

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value (1000 pF)	Tolerance	Peculiarity

ECEA	50	M	R47	
Type	Voltage	Peculiarity	Value (0.47 µF)	

Capacitor Type	Voltage: ECEA Type	Voltage: Other	Tolerance
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : ±0.25 pF
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : ±5%
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : ±10%
ECQM: Polyester	1E : 25 V		Z : +80%, −20%
	1H : 50 V		
ECQP: Polypropylene	1V : 35 V		P : +100%, −0%
	50 : 50 V		
ECET: Electrolytic			
ECEA□□□N: Non Polar Electrolytic	25 : 25 V		
	16 : 16 V		
QCU □: Ceramic (Chip Type)			
ECUX: Ceramic (Chip Type)			

Ref. No.	Part. No.
	CAPACITORS
C1, 70	**RCUX1H102ZF**
C2,18	**RCUX1H101K**
C3,13	**RCUX1H223MD**
C4	**RCUX1H150KC**
C5, 12, 22, 35, 39, 43, 44, 54	**RCUX1H103MD**
C6,31,42,45	**RCUX1H102MD**
C7	**RCUX1H120KC**
C8	**RCUX1H200KC**
C9	**RCUX1H040CC**
C11	**RCUV1H070CC**
C14	**RCUX1H222MD**
C15,32,34,38	**ECEA0GKS330**
C16,47,53	**ECEA0GKS221**
C17	**ECUX1E333MD**
C19	**RCUX1H471KC**
C20,23,25,71,72	**ECUX1E104MD**
C21	**ECSE1CY105R**
C24, 26	**RCUX1H153MD**
C27	**ECEA1HKS010**
C28	**ECEA1HKS2R2**
C33,36	**RCUX1H681KC**
C37,40	**RCUV1H331KC**
C41,61	**ECSE1CY474L**
C46	**ECSE0GT4750R**
C48, 50, 66, 68	**ECUX1E224ZF**
C49	**ECSE0GT4750L**
C51,52,65	**ECEA0GKS101**
C62	**ECSE1EY334L**
C63	**ECSE1CY474R**
C64	**ECSE1EY334R**
C67	**ECEA0GKS470**
C69	**ECEA1HK3R3**
C115	**RCSE1CT105LU**
C116,216	**RCUX1H102MD**
C117,217	**ECSE1DT684RU**
C118,218	**ECUV1E393MD**
C119,219	**RCSE1VT224RU**
C120,220	**ECUX1H123MD**
C121,221	**ECUX1E683MD**
C122,222	**RCUX1H392MD**
C123,223	**RCUX1H122MD**
C124,125, 224,225	**ECUX1H223MD**
C215	**RCSE1CT105RU**
	RESISTORS
R1,10,19	**RRD10XJ220**
R2	**RRD10XJ101**
R3	**RRD10XJ151**
R4	**RRD10XJ102**
R5	**RRD10XJ681**
R6,18,47	**RRD10XJ470**
R7,17,20	**RRD10XJ103**
R8	**RRD10XJ822**
R9	**RRD10XJ680**
R11,13,14	**RRD10XJ223**
R12	**RRD10XJ562**
R15	**RRD10XJ222**
R16	**RRD10XJ331**
R22	**RRD18XJ820**
R23	**RRD10XJ100**
R24,25	**RRD10XJ183**
R31,32,33,36	**RRD10XJ123**
R34,35	**RRD10XJ224**
R37,38	**RRD10XJ332**
R45,46	**RRD10XJ472**
R48	**ERSB39JR40**
R49	**RRD10XJ5R6**
R50,51	**RRD10XJ4R7**
R52	**RRD10XJ751**
R53	**ERSB15J103**
R108,208	**ERJ8GCJ101**
R109,209	**ERJ8GCJ683**
R110,210	**ERJ8GCJ183**
R111,211	**ERJ8GCJ122**
R112,212	**ERJ8GCJ222**
	CHIP JUMPERS
RJ1,2,3,4,5,6,7	**RRD10XJ000**
RJ8,9,10,11,12, 13,14	**RRD18XJ000**
RJ101,102	**RRD18XK000**

Ref. No.	Part. No.	Part Name & Description
	INTEGRATED CIRCUITS	
IC1	**RVITA7358F**	IC (FM FRONT END)
IC2	**RXRA11AC**	IC (FM/AM IF AMP, DET AM OSC, MIX)
IC3	**AN7415S**	IC (MPX)
IC4	**AN6612S**	IC (MOTOR GOVERNOR)
IC5	**BA3503F**	IC (PRE AMP)
IC6	**RXRA8AC**	IC (DOLBY)
IC7	**TK10581M**	IC (GRAPHIC EQ AMP)
	TRANSISTORS	
Q1	**2SK160K5**	Transistor (AM RF AMP)
Q2	**2SA881SERF**	Transistor (MOTOR DRIVE)
Q3,4,5	**DTC143T**	Transistor (MOTOR DRIVE, SWITCHING)
Q6,7	**2SD601R**	Transistor (GRAPHIC EQ AMP)
	DIODE & RECTIFIER	
D1	**SLC22UR4F**	LED (FM ST IND)
	COILS	
L1	**RL04Y125**	Antenna Coil, FM
L2	**RL04Y19**	Oscillator Coil, FM
L3	**RL02A17**	Oscillator Coil, AM
L4	**RLQUR63K**	Oscillator Coil, AM
L5	**RLF2N5**	Antenna Coil, AM
	TRANSFORMERS	
T1	**RLI4A31**	IFT, FM 1st
T2	**RLI4A27**	IFT, FM 2nd
T3	**RLI2A27**	IFT, AM
	VARIABLE CAPACITORS	
VC1,2,3,4	**RCV4LC3RQ**	Variable Capacitor
	TRIMMER CONDENSER	
CT1,2,3	**ECRLA010A12**	Trimmer Capacitor
CT4	**ECRLA006A12**	Trimmer Capacitor
	VARIABLE RESISTORS	
VR1	**RVNCA14B4**	FM VCO Control 10 kΩ, (B)
VR2	**EVND4AA00B32**	Tape Speed Control 300Ω, (B)
VR3,4	**EVM14GA00B13**	Dolby Control 1 kΩ, (B)
VR5	**EVUBAAT50A54**	Volume Control 50 kΩ, (A)
VR103,104, 105,106,107, 203,204,205, 206,207	**EVBJS0PA1201**	Graphic EQ Control
	CERAMIC FILTERS	
CF1	**RVF107WAR**	Ceramic Filter 10.7 MHz
CF2	**RVFPFA455A**	Ceramic Filter 455 kHz
	FILTER	
Z1	**RXABPMB6A**	Component Combination
	SWITCHES	
S1	**RSH1A59Z**	Switch, Motor
S2	**QSS2233**	Switch, Function Selector
S3	**RSS3B32Z**	Switch, Band
S4,7	**RSS2B40Z**	Switch, Tape Selector, Dolby
S5	**RSS2B56Y**	Switch, Ultra Phonic
S6	**QSS2238**	Switch, Reverse
	JACKS	
J1	**RJJD3S5Z**	Headphones
J2	**RJJB2Z**	DC IN

GAD D
H.M (T.K) MC Printed in Japan Ⓕ